

In re Application of: Berthet et al.  
Application No. 09/636,237

**Amendments to the Abstract**

Please delete the Abstract and add the following new Abstract:

In order to detect and iteratively decode encoded and interleaved symbols, prior to any iteration, a linear estimation (A) of the transmission channel  $\hat{H}_{(z)}^1$  is run on the basis of specific transmitted symbols. Then, by iterations, equalization (B) and decoding (C) process are subjected to an exchange of a priori information ( $D_2$ ) on the symbol bits resulting from the decoding process (C) in the case of the equalization process (B) and on the encoded bits ( $D_1$ ) resulting from the equalization process (B) in the case of the decoding process (C) and an updated iterative re-estimation ( $G, E_2$ ) of the transmission channel is run on the basis of the information resulting from the equalization (B) and decoding (C) process.

A replacement Abstract is attached hereto on a separate sheet in accordance with 37 CFR 1.72.

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## ABSTRACT

B<sup>n</sup>

In order to detect and iteratively decode encoded and interleaved symbols, prior to any iteration, a linear estimation (A) of the transmission channel  $\hat{H}_{(z)}^1$  is run on the basis of specific transmitted symbols. Then, by iterations, equalization (B) and decoding (C) process are subjected to an exchange of a priori information ( $D_2$ ) on the symbol bits resulting from the decoding process (C) in the case of the equalization process (B) and on the encoded bits ( $D_1$ ) resulting from the equalization process (B) in the case of the decoding process (C) and an updated iterative re-estimation ( $G, E_2$ ) of the transmission channel is run on the basis of the information resulting from the equalization (B) and decoding (C) process.

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